

Global Threats and Challenges

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The written testimony I provided this and other Congressional committees last February had three sections. The first highlighted key trends shaping the ***emerging global security environment*** and concluded that the general turmoil and uncertainty prevalent since the end of the Cold War would continue through the next decade, because the basic conditions driving change remained largely in place. The second section listed those potential ***near-term scenarios*** that worried me most. Some of these – a major terrorist attack against the US, worsening conditions in the Middle East, conflict between India and Pakistan – were unfortunately, all too accurate. Others – dramatic changes on the Korean peninsula, worsening relations with Russia, and conflict between China and Taiwan – we continue to monitor. The final section, ***longer-term concerns***, focused on challenges resulting from the extent and pace of our global military engagement, the asymmetric threat, and the threat posed by the strategic and regional military forces of potential adversaries.

On balance, I stand by last year's testimony, and believe it still captures the broad range of security issues most likely to confront the United States over the next decade or so. That said, the catastrophic events of 11 September (and their aftermath) brought a new dynamic to the global situation. While the longer-term implications – for us, our adversaries, and the rest of the world – are still to be determined, we can make some preliminary observations.

The Post-September 11 Security Environment: What's Changed?

A New Notion of 'Strategic' Threat

September 11 brought home the sharp reality of what previously had been more a theoretical concept – the asymmetric threat to our homeland. A strategic attack was carried out against US territory, not by the military forces of a rival state, but by a shadowy, global network of extremists, who struck unprotected targets, using methods we did not anticipate. The attackers turned two of our strengths – a free, tolerant, and open society, and the world's best air transportation system – into deadly vulnerabilities. Their attack had deep human, economic, and

psychological impacts. The terrorists were not deterred by our overwhelming military superiority, in fact, for that day at least, they made it irrelevant. Traditional concepts of security, threat, deterrence, warning and military superiority don't completely apply against this new strategic adversary.

Perceptions of the US

Perhaps the most critical dynamic in the wake of the terrorist attacks is how the rest of the world now perceives the US. On one hand, September 11 exposed US vulnerabilities and demonstrated the strategic potential of a well-executed asymmetric attack, facts that are extremely appealing to our foes. But rather than demoralizing the US, the attack generated intense patriotism and resolve at home, sympathy and support from peoples and states around the globe, and a greater willingness among the major powers to accept or accede to US leadership (at least temporarily). And the speed and efficiency with which we have projected power to an austere theater, deposed the Taliban, and continue to attack Al Qaida, are leaving a lasting impression. Over the longer-term, the outcome of the war on terrorism will be decisive in determining international perceptions of the US. Success will strengthen our role and leverage, and accentuate positive trends. Failure would invite a host of challenges.

A New Struggle

The 'Post Cold War' period ended on 11 September. The next decade or so may well be defined by 'the struggle over globalization.' Values and concepts long-championed by the United States and the West – political and economic openness, democracy and individual rights, market economics, international trade, scientific rationalism, and the rule of law – are being carried forward on the tide of globalization – money, people, information, technology, ideas, goods and services moving around the globe at higher speeds and with fewer restrictions. Our adversaries increasingly understand this link. They equate globalization to Americanization and see the US as the principal architect and primary beneficiary of an emerging order that undermines their values, interests, beliefs,

and culture. They blame the US for 'what's wrong' in the world, and seek allies among states, groups, and individuals who worry about US hegemony and are unhappy with the present or perceived future. They are adept at using globalization against us – exploiting the freer flow of money, people, and technology ... attacking the vulnerabilities presented by political and economic openness ... and using globalization's 'downsides' (demographic and economic imbalances, large numbers of unemployed youth, western cultural penetration, declining living standards, corrupt and ineffective governments, decaying infrastructures, etc.) to foster an extremist message, and attract recruits and support from among 'globalization's losers.'

The 11 September terrorist attacks were the first strategic strikes in a war against the US vision of the future world order. They targeted our homeland, but also struck a blow against global openness, the global transportation network, and the global economy. These extremists and their allies understand that their desired world cannot coexist with our brand of civilization. Encouraging, furthering and consolidating the positive aspects of globalization, while reducing and managing its downsides, and defeating its enemies, may well be the civilized world's 'measure of merit' for the next decade.

Increased Uncertainty ... and Unpredictability

Last year, I highlighted several trends – globalization ... disaffected states, groups, and individuals ... demographic changes ... rapid technology development and proliferation ... ethnic conflict ... resource shortages ... humanitarian emergencies ... and the uncertain future of Russia, China, and other key states and regions – as the factors most likely to define the emerging security environment. Recognizing the 'staying power' of these trends, and their combined impact on global stability, I concluded that the next decade would be at least as turbulent and uncertain as the 1990s. Since September 11, my 'expectation of turmoil and uncertainty' has heightened significantly:

- ***The global economy*** looks worse than it did last year, when most analysts were forecasting a near-term return to the high-growth experience of the late 1960s and early 1970s. Many now fear a global recession, which will take a heavy toll, especially on countries like Argentina, Brazil and Turkey.
- ***The number of people in need*** will likely increase significantly over last year's outlook, a function of the global economic slowdown, increasing emigration pressures in low income countries, and continuing humanitarian pressures in Afghanistan, Burundi, North Korea, Sudan, and Tajikistan.
- ***Global defense issues*** are murkier. Last year, we were anticipating a gradual increase in global defense spending, believing that many states would seek to recapitalize defense sectors neglected during the 1990s. A global recession will undermine that. Spending constraints will also impact global arms markets, defense industrial cooperation and consolidation, and the pace of global military technology development. Meanwhile, many states will reassess their military and security needs, questioning the role of traditional military forces in deterring and defeating terrorism and other asymmetric threats.
- ***The Muslim world*** is under increased pressure and may be at a strategic crossroads, as populations and leaders sort through competing visions of what it means to be a Muslim state. Longstanding issues – resentment toward the US and the West, unfavorable demographic and economic conditions, efforts to strike a balance between modernization and respect for traditional values – are exacerbated by the global war on terrorism. These pressures will be most acute in moderate Arab states and Indonesia.
- ***Geostrategic relationships*** are also more in flux since September. The war on terrorism is affecting the global perspective of all major powers, and relations between and among the US, Russia, China, India, and Pakistan are especially dynamic. New opportunities and challenges

abound. By the same token, longstanding regional problems – especially Kashmir and the Israeli-Palestinian dispute – have taken on increased global importance.

Near-Term Concerns

The list of near-term (12 months) things that worry me most has changed somewhat since 11 September. In terms of ‘good news,’ I am more optimistic now about the potential for lasting improvement in our relations with Russia. Putin’s decision to side with the US in fighting terrorism could be historic, although I recognize that obstacles remain. I am also less concerned about the prospects for a major confrontation between China and Taiwan. Beijing faces significant domestic changes in the coming year – the 16th Party Congress will take place this fall, and China will undertake a number of actions in line with WTO membership – and will want to use its cooperation on the war on terrorism as a means to ease tensions and maintain stability on the foreign policy front.

Now for the bad news:

- ***A major terrorist*** attack against US interests here or abroad, designed to produce mass casualties and/or severe infrastructure and economic damage, remains my most pressing concern (I will discuss the issue in more detail on page 13). *Operation Enduring Freedom* has done significant damage to Usama Bin Ladin’s Al Qaida network, but it has not eliminated the threat. And Al Qaida is not the only organization with the capability and desire to do us harm.
- ***Escalating violence in the Middle East*** is also still high on my list. The Palestinian-Israeli conflict is intensifying and both sides increasingly operate from a zero-sum perspective. The pressure on moderate Arab governments is high. The situation could escalate rapidly, risking instability within these states and/or a wider regional war.
- ***Major war between India and Pakistan.*** Tensions remain high, and another high-profile terrorist attack inside India or a major border incident between deployed forces could trigger a general war, possibly risking a nuclear

exchange. Neither side has a complete appreciation of the other's red lines. The potential for miscalculation is frightening.

- ***Internal Challenges to Pakistan's government.*** President Musharraf has made dramatic changes in Pakistan, but he faces opposition, perhaps violent, from extremists. Pakistan's future course has a direct impact on US counterterrorism and counter-proliferation policies.
- ***Widespread violence against US citizens and interests*** in Colombia, the Philippines, or Indonesia. Political, economic, and social conditions and developments in all these areas could result in an increased physical threat to US citizens and facilities.

A New Threat Paradigm

During the Cold War, and in the period since the collapse of the Soviet Union, our threat paradigm focused primarily on other states, and especially the military 'force-on-force' capabilities of known enemies. Even transnational issues – terrorism, crime, proliferation, the drug trade – were seen mostly from a state perspective, either in terms of state-sponsorship, or with the understanding that troubled states allowed or fostered these activities. This view oriented our national security response toward activities designed to influence the behavior of other nations – deterrence, demarches, economic sanctions, military assistance, etc. It put a very high premium on military power as the ultimate guarantor of our security.

In today's world, this state-oriented threat model is necessary, but not sufficient. It no longer covers the entire threat spectrum, and those areas it leaves out can not be dismissed as 'lesser included cases.' Globalization is creating new conditions that minimize the importance of national boundaries. Small cells operating within a state, or larger networks that transcend international borders, can do us great harm. Non-state adversaries are not likely to be deterred by our overwhelming military superiority, and will often present challenges that do not lend themselves to a predominantly military solution.

In the wake of September 11, I have accelerated consideration of a new paradigm for assessing the full range of security challenges we face now and in the future. That framework rests on several basic ideas: the expectation of continuing global turmoil (outlined above) ... thoughts about how others are reacting to the perception of US dominance ... the notion of dangerous conditions created by the convergence of numerous negative global trends ... the strategic importance of the asymmetric threat ... and one element that hasn't changed since 11 September – the traditional military threat posed by the strategic and regional forces of other nations. Collectively, these factors create an extremely dynamic, complex, and problematic global environment. Our security depends on the integrated application of all elements of national power against the full range of security challenges.

Identifying the Players (How Others React to Our Global Capabilities and Status)

Much of the world increasingly worries that the key trends driving global change – especially globalization – are inherently pro-US and will result in the expansion, consolidation and dominance of American ideas, institutions, culture, and power. This causes varying degrees of apprehension, and the way that states, groups, and individuals react to that feeling will in many ways frame our strategic agenda. I see four general categories of reaction:

- ***Friendly competitors.*** Our friends and allies are as vital to our security as we are to theirs. They share our values and vision of the future, prosper from globalization, and are the least apprehensive about US power. They desire and benefit from US leadership, even as they chafe at some aspects of it. They will compete with us economically, and will be at odds on select security issues, but are with us on the big strategic challenges. While our differences are not trivial, they generally fall into the policy realm – interoperability, burden sharing, arguments over specific regional perspectives, UN Security Council votes, defense industrial cooperation, coalition dynamics, etc. Our

challenge is to maintain productive relationships that secure our shared interests.

- ***People on the Bubble.*** Much of the world – including most larger regional powers – only partially shares our vision. They want to secure what benefits they can from globalization without being overwhelmed by it. They typically are not yet willing or able to embrace it fully, fearing the domestic consequences, and wary of US ‘hegemony.’ Those ‘on the bubble’ generally want to back a winner, and will frequently be with us on the ‘easy’ issues. But they will also pursue policies that work against our interests (proliferation, for instance), oppose us on a wider range of security questions, and will frequently maintain troubling foreign relationships and significant military forces as a hedge against US-Western dominance. They will generally present ‘carrot and stick’ kinds of problems for US security ... they must be deterred and dissuaded from military ‘adventurism,’ while being encouraged and rewarded for actions that bring them closer to the community of responsible nations.
- ***Rogues, Renegades, and Outlaws.*** These states, groups, and individuals fear US power and absolutely reject our vision. They blame us for the ‘world’s problems’ and will routinely engage in violence, using primarily asymmetric means to target our policies, facilities, interests, and citizens. They respect, but are not necessarily deterred by our military strength. They will not fight by our rules. Our vision cannot coexist with theirs.
- ***The ‘have nots.’*** These are ‘globalization’s losers’ ... too poor, uneducated, badly governed or otherwise disadvantaged to reap the benefits of political and economic openness. They generally face deepening economic stagnation, political instability, and cultural alienation. On the surface, this group is relatively powerless, and presents more humanitarian than security challenges. But the conditions they live in are fertile ground for political, ethnic, ideological, and religious extremism, and their frustration is increasingly directed at the United States and the West. In the globalized world we ignore them at our own peril.

Dangerous Conditions... Accentuating the Negatives

Many global trends are generally positive, and a decade from now most of the world's people will be better off. But almost every positive trend also has a downside. I am very concerned about dangerous conditions arising from the convergence of various negative global trends (highlighted below). Collectively, these create a potentially explosive mix of political, economic, social, technological and military circumstances. Our adversaries – especially rogues, renegades, and outlaws – will seek to exploit these to further their interests and undermine ours. These dangerous conditions underscore the interconnected, multidimensional nature of the security challenges we are most likely to encounter. They reinforce the notion that 'all politics is global,' and that almost everything that happens in the world can impact our security.

- ***Demographic and economic imbalances.*** The world will add close to a billion people in the next decade, with 95% of the increase coming in poorer developing countries, mostly in urban areas. Rapid population increases, growing unemployment, youth bulges, stagnant or falling living standards, poor government, and decaying infrastructures create an environment (and a manpower pool) conducive to extremist messages. The extensive spread of these conditions throughout Middle Eastern countries makes them particularly susceptible.
- ***Acute resource shortages*** in the Middle East, Sub-Sahara Africa, and parts of Asia are a source of resentment, alienation, and frustration. They may not cause wars by themselves, but they will exacerbate tensions, and could serve as the trigger for violent conflict (the straw that breaks the camel's back). On a grander scale, the West's relatively high rate of consuming resources, despite its' declining percentage of global population, is a continuing source of irritation for many in the developing world.
- ***Rapid technology development and proliferation.*** The rapid pace of technology development is creating more, and more exposed, technological vulnerabilities in advanced states. Meanwhile, the globalization of technology

and information – especially regarding weapons of mass destruction (WMD) and advanced conventional weapons – will increasingly accord smaller states, groups, and individuals access to destructive capabilities previously limited to major world powers. Massive destructive technologies in the hands of ‘evil doers’ is my worst fear.

- **Poor Governance.** Corrupt and ineffective governments will fail to meet political, economic, and social challenges. Their actions will marginalize large numbers of people ... foster economic stagnation, instability and cultural alienation ... spawn conflicts ... create/allow lawless safe-havens ... and increase the power of dangerous non-state entities.

The Asymmetric Threat

Make no mistake, we are the target. Our adversaries believe they must derail the emerging world order or be overcome by it. They also understand the singular importance of the United States in shaping that order and know that they cannot prevail if the US remains actively engaged and influential around the globe. Finally, they recognize that they cannot match our tremendous political, economic, military, and cultural power on our terms. These perceptions are the driving elements behind the asymmetric threat.

Asymmetric approaches involve acting in unexpected ways, to present your enemy with capabilities and situations he is unable or unwilling to respond to before you are able to achieve decisive results. While asymmetric concepts are as old as warfare itself, they are important today because they are virtually the only means our enemies have for coping with US power. Asymmetry works at the strategic, operational, and tactical levels.

At the strategic level, asymmetric approaches will be designed to fundamentally change the United States, the way we behave in the world, and the way others see us. Strategic goals could include: undermining our political, economic, and social infrastructures ... destroying our general optimism ... thwarting US global

leadership ...eliminating our will and/or our capacity to remain globally engaged ... curtailing the global appeal of our ideas, institutions, and culture ... and denying US leaders the military option. The 11 September attacks had elements of most of these themes. They brought 'the war' to the American people, demonstrated US vulnerability, and 'gave heart' to anti-US elements around the globe. The strategic intent was to deliver a blow that would force the US to either alter its Middle East policies, or goad America into a 'disproportionate response' that would trigger an apocalyptic confrontation between Islam and the West. Other secondary impacts, on the political and economic openness of the US and other states, and more directly on the US and global economies, were probably more 'unintended consequences' than design. Still, their impact (and the implications for future attacks) is significant.

In this context, it is important to think about what our adversaries might have learned from 11 September, and our subsequent actions. Some may conclude that those attacks were ultimately counterproductive, because they were the 'wake-up call' that energized the US and its partners to take decisive action against the global terrorist threat. This is likely to be especially true for states, because they are vulnerable to a strategic response from the US. From this perspective, we might expect future attacks to be more limited, to avoid crossing the threshold that generates an overwhelming US reaction. But others, especially terrorist groups intent on inflicting the greatest damage possible, will undoubtedly be dazzled by the 'strategic potential' of 11 September, and conclude that the only thing wrong with those attacks was that they did not go far enough. For them, 11 September showed the way, and the 'art of the possible' became almost infinite. If this proves true, our definition of success might eventually be that we prevented an asymmetric attack from having a decisive strategic impact.

At the tactical and operational levels, our enemies (both state and non-state) will try to use asymmetry to 'level the playing field' against the US military, so that we

are unable to fight the way we want to fight. While specific adversaries, objectives, targets, and means of attack will vary widely from situation to situation, I continue to expect that most military asymmetric approaches will fit generally into the five broad, overlapping categories I outlined in last year's testimony:

- **Counter will** ... designed to make us 'not come, or go home early' ... by severing the 'continuity of will' between the US national leadership, the military, the people, our allied and coalition partners, and world public opinion.
- **Counter access** ... designed to deny US (allied) forces easy access to key theaters, ports, bases, facilities, air, land, and sea approaches, etc.
- **Counter precision engagement** ... designed to defeat or degrade US precision intelligence and attack capabilities.
- **Counter protection** ... designed to increase US (allied) casualties and, in some cases, directly threaten the US homeland.
- **Counter information** ... designed to prevent us from attaining information and decision superiority.

Beyond these broader generalizations, I have highlighted below the kinds of asymmetric threats we are most likely to encounter during the next 10 to 15 years.

Terrorism. As was vividly displayed on 11 September, terrorism remains the most significant asymmetric threat to US interests at home and abroad. I am most concerned about Islamic extremist organizations, in the Middle East, and throughout the world. Other groups with varying causes – nationalistic, leftist, ethnic or religious – will continue to pose a lesser threat.

Operation Enduring Freedom has significantly damaged the Al Qaida network, destroying its' geographic center of gravity, causing the death or arrest of several key leaders, and putting others on the run. The group has suffered a loss of prestige, institutional memory, contacts, and financial assets that will ultimately

degrade its effectiveness. Even if Usama Bin Ladin survives, his ability to execute centralized control over a worldwide network has been diminished.

That said, the Al Qaida network has not been eliminated, and it retains the potential for reconstitution. Many key officials and operatives remain and new personalities have already begun to emerge. Some operations that were already planned could be easily completed. The organization could also splinter into a number of loosely affiliated groups, united by a common cause and sharing common operatives. Their capability to conduct simultaneous or particularly complex attacks would likely be degraded, but they would continue to be a lethal threat to our interests worldwide, including within the US.

If Bin Ladin is killed or captured, there is no identified successor capable of rallying so many divergent nationalities, interests, and groups to create the kind of cohesion he fostered amongst Sunni Islamic extremists around the world. Bin Ladin is synonymous with Al Qaida, and the media attention he has garnered, along with his charisma and other attributes, have made him an inspirational rallying-point for like-minded extremists. With Bin Ladin's removal, the network most likely will eventually fragment under various lieutenants pursuing differing agendas with differing priorities.

In general, terrorists will likely favor proven conventional weapons over chemical, biological, radiological, or nuclear (CBRN) materials, at least through the near term. However, several groups, especially Al Qaida, have pursued CBRN capabilities, and the threat from terrorist use of these materials will continue. Many of the technologies associated with the development of CBRN weapons – especially chemical and biological agents – have legitimate civil applications and are classified as dual-use. The increased availability of these technologies, coupled with the relative ease of producing some chemical or biological agents, make them attractive to terrorist groups intent on causing panic or inflicting larger numbers of casualties. The psychological impact of the recent anthrax cases in

the US did not go unnoticed. Some terrorist groups have demonstrated the willingness to inflict greater numbers of indiscriminate casualties and would take any measure to achieve these goals.

Since 11 September, the US has employed extraordinary security measures at home and at abroad. We are also enjoying unprecedented cooperation on terrorism intelligence and security issues from governments across the globe. These conditions have resulted in a particularly difficult operating environment for terrorists. However, as history shows, terrorists work on their own timeline and are patient. They are content to wait for the right opportunity – even if it takes years – to increase their chances of success.

Many terrorist groups consider themselves to be engaged in a war. They are willing to take risks, accept losses, and carry on. Terrorists make every effort to mask their operational infrastructure and activities until the moment they are used in an attack. This creates tremendous intelligence challenges.

Counterterrorism must be viewed as a continuous campaign pitting intelligence and law enforcement services against intelligent, self-styled warriors. We need a fully coordinated community effort, with open sharing of critical intelligence, security, and law enforcement information among the various players. We must continue to be vigilant, and never assume that we have ‘won the war.’ We will be most vulnerable when the threat ‘appears’ to have diminished, security measures are relaxed, and we return to ‘normal.’

Threats to Critical Infrastructures. Many adversaries are developing capabilities to threaten the US homeland. In addition to more traditional strategic military threats (discussed in the next section), our national infrastructures and our economy are vulnerable to disruptions by other forms of physical and cyber attack. I am especially concerned about attacks against one or more, relatively unprotected, key nodes in our economic infrastructure – banking and finance, telecommunications, energy, power, agriculture, the industrial base, etc. The

interdependent nature of these and other portions of our domestic infrastructure, and the connectivity between our infrastructure and the global economic system, create even more of a vulnerability. Foreign states have the greatest attack potential (in terms of resources and capabilities), but the most immediate and serious threat today is from insiders, terrorists, criminals, and other small groups or individuals carrying out well-coordinated strikes against selected critical nodes.

Information Operations. Potential adversaries recognize that our political and economic livelihood increasingly depends on advanced information technologies and systems. They also understand that information superiority provides the US with unique military advantages. Many also assess that public opinion plays a key role in our society. Accordingly, numerous potential foes are pursuing information operations capabilities as a relatively inexpensive means to undermine domestic and international support for US actions, to attack US national infrastructures, or to challenge our information superiority. The threat from information operations will expand significantly during the next decade or so.

Information operations can employ a range of capabilities, including electronic warfare, psychological operations, physical attack, denial and deception, computer network attack, and the use of more exotic technologies such as directed energy weapons or electromagnetic pulse weapons.

- **Computer network operations**, for instance, offer new options for attacking the United States, potentially anonymously and with selective (including non-lethal) effects. Although our classified networks are relatively secure from these kinds of attacks, most of our unclassified networks – including some that host sensitive information – are not. Software tools for network attack, intrusion, and disruption are globally available over the Internet, providing almost any interested US adversary a basic computer network exploitation or attack capability. The opportunity for terrorists to take advantage of attack

tools is escalating very rapidly. Further, some hacker groups that actively support terrorists could conduct attacks on their behalf.

WMD and Missiles. Potential adversaries may attempt to influence the US and its allies, preclude US force options, and offset US conventional military superiority by developing WMD and missiles. The desire to acquire these capabilities is great and, unfortunately, globalization creates an environment more amenable to proliferation activities. Some 25 countries now possess or are actively pursuing WMD or missiles. Meanwhile, a variety of non-state actors, including Al Qaida, have an increasing interest. New alliances have formed, providing pooled resources for developing these capabilities, while technological advances and global economic conditions have made it easier to transfer materiel and expertise. Most of the technology is readily available, and most raw materials are common. The basic production sciences are generally understood, although the engineering and the component integration necessary for ballistic missile production are not so easily achieved. All told, the global WMD and missile threat to US and allied territory, interests, forces, and facilities will increase.

- **Russia, China, and North Korea** remain the suppliers of primary concern. Russia has exported ballistic missile and nuclear technology to Iran. China has provided missile and other assistance to Iran and Pakistan. North Korea remains a key source for ballistic missiles and related components and materials.
- The potential development/acquisition of **intercontinental missiles** by several potentially hostile states – especially North Korea, Iran, and Iraq – would increase the strategic threat to the United States. Meanwhile, the proliferation of longer-range theater (up to 3,000 km) ballistic and cruise missiles and technologies is a growing challenge. The numbers of these systems will continue to increase during the next 10 years. So too will their accuracy and destructive impact.

- **Iran** has established solid and liquid propellant capabilities and already is beginning to proliferate missile production technologies to Syria. Iranian proliferation of complete missile systems may occur in the future.
- **Several states of concern – particularly Iran and Iraq – could acquire nuclear weapons** during the next decade or so, and some existing nuclear states – India and Pakistan, for instance – will undoubtedly increase their inventories.
- **Chemical and biological weapons** are generally easier to develop, hide, and deploy than nuclear weapons and will be more readily available to those with the will and resources to attain them. More than two dozen states or non-state groups either have, or have an interest in acquiring, chemical weapons, and there are a dozen countries believed to have biological warfare programs. I expect the proliferation of chemical and biological weapons to continue and these weapons could well be used in a regional conflict or terrorist attack over the next decade.
- **Volumetric weapons (VW)** are not typically considered WMD (a fact that might make them more appealing to our adversaries), but their destructive potential is sobering. Unlike traditional military weapons, which rely on high explosive technologies, VW depend primarily on air blast or overpressure to damage or destroy their targets. They actually form clouds, or volumes, of fuel rich materials that detonate relatively slowly. The result is a much larger area of high pressure that causes more damage to personnel (even dug in) and structures. VW technology has been around for some time, and is becoming more widely known, with several countries openly advertising it for sale. We should anticipate facing VW in either a terrorist or combat environment during the next 10 years.

The Foreign Intelligence Threat. We continue to face extensive intelligence threats from a large number of foreign nations and sub-national entities including terrorists, international criminal organizations, foreign commercial enterprises, and other disgruntled groups and individuals. These intelligence efforts are

generally targeted against our national security policy-making apparatus, national political, economic, and military infrastructures, military plans, personnel, and capabilities, our overseas facilities, and our critical technologies. While foreign states present the biggest intelligence threat, all our enemies are likely to exploit technological advances to expand their collection activities. Moreover, as the events of 11 September so tragically demonstrated, the open nature of our society, and the increasing ease with which money, technology, information, and people move around the globe in the modern era, make effective counterintelligence and security that much more complex and difficult to achieve.

Denial and Deception (D&D). Many potential adversaries are undertaking more and increasingly sophisticated D&D operations against the United States. These efforts generally are designed to hide key plans, activities, facilities, and capabilities from US intelligence, to manipulate US perceptions and assessments, and to protect key capabilities from US precision strike platforms. Foreign knowledge of US intelligence and military operations capabilities is essential to effective D&D. Advances in satellite warning capabilities, the growing availability of camouflage, concealment, deception, and obscurant materials, advanced technology for and experience with building underground facilities, and the growing use of fiber optics and encryption, will increase the D&D challenge.

Counter-Space Capabilities. The US reliance on (and advantages in) the use of space platforms is well known by our enemies. Many are attempting to reduce this advantage by developing capabilities to threaten US space assets, in particular through denial and deception, signal jamming, and ground segment attack. A number of countries are interested in or experimenting with a variety of technologies that could be used to develop counter-space capabilities. These efforts could result in improved systems for space object tracking, electronic warfare or jamming, and directed energy weapons. Some countries have across-the-board programs underway, and other states and non-state entities are

pursuing more limited – though potentially effective – approaches. By 2010, future adversaries will be able to employ a wider variety of means to disrupt, degrade, or defeat portions of the US space support system.

Criminal Challenges. International criminal activity of all kinds will continue to plague US interests. I am very concerned about the growing sophistication of criminal groups and individuals and their increasing potential to exploit certain aspects of globalization for their own gain. The potential for such groups to usurp power, or undermine social and economic stability, especially in states with weak governments, is likely to increase.

- ***International drug cultivation, production, transport, and use*** will remain a major problem. The connection between drug cartels, corruption, terrorism, and outright insurgency will likely increase as drug money provides an important funding source for all types of criminal and anti-government activity. Emerging democracies and economically strapped states will be particularly susceptible. The drug trade will continue to produce tensions between and among drug producing, transport, and user nations.
- I remain concerned about other forms of international criminal activity – for instance, ‘cyber-criminals’ who attempt to exploit the electronic underpinnings of the global financial, commercial, and capital market systems, and nationally based ‘mafia’ groups who seek to undermine legitimate governments in states like Russia and Nigeria. Globally, criminal cartels are becoming more sophisticated at exploiting technology, developing or taking control of legitimate commercial activities, and seeking to directly influence – through infiltration, manipulation, and bribery – local, state, and national governments, legitimate transnational organizations, and businesses. Increased cooperation between independent criminal elements, including terrorist organizations, is likely.

Traditional Military Challenges

Beyond the asymmetric threats outlined above, we will continue to face an array of more traditional, albeit evolving, challenges from the strategic and regional forces of other nations. While less advanced than the US military, these forces will remain potent by global and regional standards, and, in many cases, be fully capable of accomplishing significant objectives. Moreover, during the next ten years, many states will seek to augment their militaries with selected higher-end systems, including: improved strategic strike capabilities ... WMD and missiles ... advanced command, control and intelligence systems, including satellite reconnaissance ... precision strike capabilities ... global positioning ... advanced air defense systems ... and advanced anti-surface ship capabilities. As I mentioned earlier, some of these 'niche' capabilities will be designed to counter key US concepts (global access, precision engagement, force protection, information superiority, etc.), in an attempt to deter the US from becoming involved in regional contingencies, or to raise the cost of US engagement.

For the most part, however, even large regional forces will be hard pressed to match our dominant maneuver, power projection, and precision attack capabilities, and no state will field integrated, satellite-to-soldier military 'system of systems' capabilities on a par with the US. But in a specific combat situation, the precise threat adversary forces pose will depend on a number of factors, including: the degree to which they have absorbed and can apply key '21st Century' technologies, have overcome deficiencies in training, leadership, doctrine, and logistics, and on the specific operational-tactical environment. Under the right conditions, their large numbers, combined with other 'situational advantages' – such as initiative, limited objectives, short lines of communication, familiar terrain, time to deploy and prepare combat positions, and the skillful use of asymmetric approaches – could present significant challenges to US mission success. China and perhaps Russia at the high end, followed by North Korea,

Iran, and Iraq, are all examples of militaries that could field large forces with a mix of current and advanced capabilities.

China. Beijing recognizes that its long term prospects to achieve great power status depend on its success at modernizing China's economy and infrastructure, and it will continue to emphasize those priorities ahead of military modernization. Despite the limitations posed by these other priorities, China's military is modernizing, but faces difficulty absorbing technological upgrades at a fast rate. Accordingly, I expect China to continue to allow total military spending to grow at about the same rate as the economy, maintaining a defense burden of as much as 5% of GDP (between \$40 and \$60 billion in defense spending last year). Part of this steady defense spending increase will be absorbed by rapidly rising personnel costs, a consequence of the overall transformation toward a market economy.

One of Beijing's top military priorities is to strengthen and modernize its small, dated strategic nuclear deterrent force. While the ultimate extent of China's strategic modernization is difficult to forecast, the number, reliability, survivability, and accuracy of Chinese strategic missiles capable of hitting the United States will increase during the next ten years. We know little about China's concepts for nuclear weapons use, especially with respect to Beijing's views on the role and utility of strategic weapons in an international crisis involving important Chinese interests, for example Taiwan or the Korean peninsula.

- China currently has about 20 CSS-4 ICBMs with a range of over 12,000 km. New strategic missile systems are under development, including two new road-mobile, solid-propellant ICBMs. One of these, the 8,000 km DF-31, was flight-tested in 1999 and 2000. Another, longer-range mobile ICBM, likely will be tested within the next several years.
- China currently has a single XIA class SSBN which is not operational. It is intended to carry 12 CSS-NX-3 missiles (with ranges exceeding 1,500 km).

China is developing a new SSBN and an associated SLBM (the 8,000+ km JL-2). These systems likely will be developed and tested later this decade.

- China also has upgrade programs for associated command, control, communications, intelligence and other related strategic force capabilities.

In terms of conventional forces, Beijing is pursuing the capability to defend its eastern seaboard – the economic heartland – from attacks by a ‘high-technology’ opponent employing long-range precision strike capabilities. This means China is improving its air, air defense, anti-submarine, anti-surface ship, reconnaissance, and battle management capabilities. China also is rapidly expanding its conventionally-armed theater missile force. Both efforts will give it increased leverage against Taiwan and, to a lesser extent, other US Asian allies.

As a result of these and other developments, China’s capability for regional military operations will improve significantly. By 2010, China’s forces will be much better equipped, possessing more than 750 theater-range missiles, hundreds of fourth-generation (roughly F-16 equivalent) aircraft armed with modern precision-guided weapons, thousands of older model tanks and artillery, over 20 advanced diesel and third generation nuclear submarines, and some 20 or so new surface combatants. China also is likely to field an integrated air defense system and modern command-and-control systems at the strategic and operational levels. Selective acquisitions of advanced systems from Russia – such as SOVREMENYY destroyers, KILO submarines, and FLANKER aircraft – will remain an important part of the PLA’s modernization effort.

The Taiwan issue will remain a major potential flashpoint. It is doubtful, however, unless Taipei moved more directly toward independence, that China would attempt a large scale attack. Beijing recognizes the risk inherent in such a move. Nevertheless, by 2005-2010, China’s conventional force modernization will provide an increasingly credible military threat for short-duration attacks against Taiwan.

Russia. The 11 September attacks against the United States brought a new dynamic to the US-Russian relationship and new opportunities for cooperation. While Russia retains significant differences with the West – in its political, economic, and social make-up, and on a host of regional and global security issues – I am hopeful that we can form a more positive lasting relationship. But we should recognize that there are no easy, simple, or near term solutions to the tremendous political, economic, social, and military problems confronting Moscow. Consequently, I expect that many of the issues that concern us today – Russian proliferation of advanced military and WMD technologies, conventional weapons, and brainpower ... the security of Russia's nuclear materials and weapons ... the expanding local, regional, and global impact of Russian criminal syndicates ... negative demographic trends ... and Moscow's ultimate reliability as a global security partner – will be with us for some time to come.

In the meantime, Russia's Armed Forces continue in crisis. Defense resources remain especially limited, given the still relatively large Russian force structure. Moscow spent some \$40 billion on defense last year – about 3-5% of GDP – and the process of allocating monies remained extremely erratic and inefficient. This level of spending is not enough to fix the Russian military. With chronic underfunding and neglect the norm, compensation, housing, and other shortfalls continue to undermine morale. Under these conditions, military progress will remain limited. For most of the next decade (and perhaps longer), Russia's conventional forces will remain chronically weak, and will pose a diminishing threat to US interests. Toward the end of that timeframe – assuming economic recovery, sustained political support, and success at military reform – Russia could begin rebuilding an effective military, and field a smaller, but more modern and capable force in the 2015 timeframe. This improved force would be large and potent by regional standards, equipped with thousands of late-generation Cold War-era systems and hundreds of more advanced systems built after 2005.

Russia will continue to rely on nuclear weapons – both strategic and nonstrategic – to compensate for its diminished conventional military capability, a concept articulated in the October 1999 Russian Military Doctrine statement and reiterated in January and April 2000. Moscow has begun deployment of the new SS-27 ICBM and has upgrades to this missile and several other systems under development. But even priority strategic force elements have not been immune to the financial problems affecting the rest of the Russian military. SS-27 production is far below expectations and deployments are years behind. System aging, inadequate budgets, and arms control agreements ensure that Russia's strategic force will continue to decline – from some 4,500 operational warheads today, to perhaps under 1,500 by 2010 (depending on arms control treaties, decisions we make about missile defense, the state of the Russian economy, and Russian perceptions of other strategic threats, etc).

Iran. President Khatami's strong popular support from restless intellectuals, youths, and women (all growing segments of Iran's population) led to his reelection last year. But his subservience to religious conservatives, and the lack of progress on the reform agenda, are undermining that support. The conservatives, in power since 1979, remain in control of the security, foreign policy, intelligence, and defense institutions, and generally continue to view the US with hostility. For that reason, I remain concerned with Tehran's deliberate, though uneven, military buildup, which is designed to ensure the security of the regime, increase Iran's influence in the Middle East and Central Asia, deter Iraq or any other regional aggressor, and limit US regional influence.

While Iran's forces retain significant limitations with regard to mobility, logistics infrastructure, and modern weapons systems, Tehran is attempting to compensate for these by developing (or pursuing) numerous asymmetric capabilities, to include terrorism, the deployment of air, air defense, missile, mine warfare, and naval capabilities to interdict maritime access in and around the

Strait of Hormuz, and the development and acquisition of longer-range missiles and WMD to deter the US and to intimidate Iran's neighbors.

- Iran has a relatively large ballistic missile force – hundreds of Chinese CSS-8s, SCUD Bs and SCUD Cs – and is likely assembling SCUDs in country. Tehran, with foreign assistance, is buying and developing longer-range missiles, already has chemical weapons, and is pursuing nuclear and biological weapons capabilities.
- Iran's Defense Minister has publicly talked of plans for developing a platform more capable than the Shahab 3 (a 1,300 km MRBM based on North Korea's No Dong). Iran also is pursuing an ICBM/space launch vehicle and could flight test such a system before the end of the decade. Cooperation with Russian, North Korean, and Chinese entities is furthering Tehran's expertise. However, if Iran purchased an ICBM from North Korea or elsewhere, further development might not be necessary.
- Iran's navy is the most capable in the region and, even with the presence of Western forces, can probably stem the flow of oil from the Gulf for brief periods by employing a layered force of KIL0 submarines, missile patrol boats, naval mines, and sea and shore-based anti-ship cruise missiles. Aided by China, Iran has developed a potent anti-ship cruise missile capability and is working to acquire more sophisticated naval mines, missiles, and torpedoes.

Although Iran's force modernization efforts will proceed gradually, during the next 15 years it will likely acquire a full range of WMD capabilities, field substantial numbers of ballistic and cruise missiles – including, perhaps, an ICBM – increase its inventory of modern aircraft, upgrade and expand its armored forces, and continue to improve its anti-surface ship capability. Iran's effectiveness in generating and employing this increased military potential against an advanced adversary will depend in large part on 'intangibles' – command and control, training, maintenance, reconnaissance and intelligence, leadership, and situational conditions and circumstances.

Iraq. Saddam's goals remain to reassert his rule over the Kurds in northern Iraq, undermine all UN restrictions on his military capabilities, and make Iraq the predominant military and economic power in the Persian Gulf and the Arab world. The on-going UN sanctions and US military presence continue to be the keys to restraining Saddam's ambitions. Indeed, years of UN sanctions, embargoes, and inspections, combined with US and Coalition military actions, have significantly degraded Iraq's military capabilities. Saddam's military forces are much smaller and weaker than those he had in 1991. Manpower and equipment shortages, a problematic logistics system, and fragile military morale remain major shortcomings. Saddam's paranoia and lack of trust – and related oppression and mistreatment – extend to the military, and are a drain on military effectiveness.

Nevertheless, Iraq's ground forces continue to be one of the most formidable within the region. They can move rapidly and pose a threat to Iraq's neighbors. Baghdad's air and air defense forces retain only a marginal defensive capability. The Air Force cannot effectively project air power outside Iraq's borders. Still, Saddam continues to threaten Coalition forces in the No Fly Zones, and remains committed to interfering with Coalition military operations monitoring his military activities.

Iraq retains a residual level of WMD and missile capabilities. The lack of intrusive inspection and disarmament mechanisms permits Baghdad to enhance these programs. Iraq probably retains limited numbers of SCUD-variant missiles, launchers, and warheads capable of delivering biological and chemical agents. Baghdad continues work on short-range (150 km) liquid and solid propellant missiles allowed by UNSCR 687 and can use this expertise for future long range missile development. Iraq may also have begun to reconstitute chemical and biological weapons programs.

Despite the damage done to Iraq's missile infrastructure during the Gulf War and *Operation Desert Fox*, Iraq may have ambitions for longer-range missiles, including an ICBM. Depending on the success of acquisition efforts and the degree of foreign support, it is possible that Iraq could develop and test an ICBM capable of reaching the US by 2015.

Saddam's regime will continue to pose political and military challenges to Coalition interests. Should sanctions be removed formally or become ineffective, Iraq will move quickly to expand its WMD and missile capabilities, develop a more capable strategic air defense system, and improve other conventional force capabilities. Saddam is intent on acquiring a large inventory of WMD and modernizing and expanding his fleet of tanks, combat aircraft, and artillery guns. While Iraq would still have to grapple with shortcomings in training and military leadership, such a modernized and expanded force would allow Saddam to increasingly threaten regional stability and ultimately, the global economy.

North Korea. During the past year, the diplomatic climate on the Korean peninsula turned more confrontational as the process of engagement stalled. Largely reversing its 'smile diplomacy' of the previous year (the unprecedented willingness to engage the Republic of Korea and the United States), Pyongyang reacted strongly to its perception of a hard-line US approach to negotiations. North Korea also has openly expressed concern that it might become a target for the US-led war against international terrorism. Less willing to engage and less receptive to change, Pyongyang is reemphasizing its established ideology, excoriating Western ideas and influence, and touting its military strength. As a result, it continues to place heavy emphasis on the maintenance and improvement of its military capabilities.

North Korea retains a large, forward deployed military force, capable of inflicting significant damage on the South. The Korean People's Army continues to demonstrate resiliency, managing during the past several years to slow the

decline in force-on-force capabilities experienced during most of the 1990s and, in some ways, marginally improve its readiness and capability for war. War on the peninsula would still be very violent and destructive, and an attack could occur with little warning. Moreover, even if the North-South rapprochement were to resume, Pyongyang is unlikely to significantly reduce its military posture and capability in the near term, because the North needs its military forces to ensure regime security, retain its regional position, and provide bargaining leverage.

North Korea continues its robust efforts to develop more capable ballistic missiles. It has deployed both short-and medium-range missiles and is developing an ICBM capability with its Taepo Dong 2 missile, judged capable of delivering a several-hundred kilogram payload to Alaska or Hawaii and a lighter payload to the western half of the United States. A three-stage TD 2 could deliver a several-hundred kilogram payload anywhere in the US. Pyongyang, thus far, is honoring its pledge to refrain from test launching long-range missiles until 2003, but otherwise probably has the capability to field an ICBM within the next couple of years.

For the near future, I expect North Korea will continue to proliferate WMD and especially missile technology – one of the few areas where it has something to offer for hard currency on the international market. Pyongyang's proliferation of No Dong missile technology is particularly important for those states seeking to extend the range of their missile fleet. I also expect North Korea to continue to develop and expand its own 'asymmetric' capabilities – WMD, missiles, Special Operations Forces, small submarine insertion platforms, etc. – in part to offset its conventional force shortcomings. In short, as long as North Korea remains around in its present form, it will represent one of the major threats to our regional and global interests.

Closing Thoughts

The longer-term trends and conditions apparent before 11 September – continuing global turmoil ... the increasing importance of the asymmetric threat ... and the traditional challenges posed by the regional and strategic military forces of other states – still apply today. But the terrorist attacks, and our response, have brought a new dynamic to the global security environment.

The ‘expectation of prolonged uncertainty’ has increased significantly since September, and our intelligence and analytic paradigms must be adjusted to assess the implications of what we do not, can not, and will not know about the nature of the future security environment and future threats. Accounting for and dealing with uncertainty has always been our biggest analytic challenge. But in today’s environment, we need to be as adept at dealing with ‘complex mysteries’ as we are at uncovering ‘hidden secrets.’ Critical analytic thinking may be our most important national asset.

On 11 September the asymmetric threat became real, and strategic. We are in a new struggle – for our way of life and our vision of the global future. Our adversaries see things the same way. They think the United States is the ‘center of gravity’ for an emerging world order that undermines their beliefs, values, interests, and culture. They need to eliminate our global power, leadership, and influence or – in their eyes – be overwhelmed by it. We are too strong to take on directly, but are potentially vulnerable to a range of asymmetric approaches. We need to ensure these do not have a decisive strategic impact.

The characteristics of this new strategic threat – extremist, global, non-state, networked, adaptive – make it less vulnerable to more traditional intelligence and security approaches, and perhaps impossible to deter (at least with military power alone). The long-term key to our adversaries’ success may lie in their ability to exploit a host of ‘negative’ global conditions to spread an extremist anti-

US message, recruit and train new members, and execute increasingly destructive attacks. In this context, our success at eliminating, containing, isolating, and managing globalization's downsides may be the strategic prerequisite to victory.

Finally, we will continue to face an array of more traditional, albeit evolving, threats from the strategic and regional military forces of other nations. While generally less advanced than the US military, these forces will remain potent by global and regional standards, and capable of accomplishing significant objectives. China and perhaps Russia at the high end, followed by North Korea, Iran and Iraq at the lower end are examples of states that will maintain significant military capabilities.

Collectively, these factors create an extremely dynamic, complex, and problematic global environment. The spectrum of real and potential threats is very wide, and the intelligence challenges are many. We are working hard to reshape our intelligence capability to deal with these challenges. Our success will depend on our ability to recruit, develop, and retain the highest quality work force ... expand our collection coverage and analytic depth and breadth ... improve the responsiveness and content of our data bases ... and build on our past successes at improving the intelligence-operator interface. Your continued support is vital to those efforts.